

Plastics - Compression moulding test specimens of thermoplastic materials

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 293:2005 sisaldab Euroopa standardi EN ISO 293:2005 ingliskeelset teksti. Käesolev dokument on jõustatud 29.09.2005 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN ISO 293:2005 consists of the English text of the European standard EN ISO 293:2005. This document is endorsed on 29.09.2005 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.
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Käsitlusala: This International Standard specifies the general principles and the procedures to be followed with thermoplastics in the preparation of compression-moulded test specimens, and sheets from which test specimens may be machined or stamped.	Scope: This International Standard specifies the general principles and the procedures to be followed with thermoplastics in the preparation of compression-moulded test specimens, and sheets from which test specimens may be machined or stamped.
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ICS 83.080.20

Võtmesõnad:

English Version

Plastics - Compression moulding of test specimens of thermoplastic materials (ISO 293:2004)

Plastiques - Moulage par compression des éprouvettes en matières thermoplastiques (ISO 293:2004)

Kunststoffe - Formgepresste Probekörper aus Thermoplasten (ISO 293:2004)

This European Standard was approved by CEN on 7 July 2005.

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Foreword

The text of ISO 293:2004 has been prepared by Technical Committee ISO/TC 61 "Plastics" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 293:2005 by Technical Committee CEN/TC 249 "Plastics", the secretariat of which is held by IBN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by January 2006, and conflicting national standards shall be withdrawn at the latest by January 2006.

This document supersedes EN ISO 293:2003.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Endorsement notice

The text of ISO 293:2004 has been approved by CEN as EN ISO 293:2005 without any modifications.

**Plastics — Compression moulding of test
specimens of thermoplastic materials**

*Plastiques — Moulage par compression des éprouvettes en matières
thermoplastiques*



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 293 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 9, *Thermoplastic materials*.

This third edition cancels and replaces the second edition (ISO 293:1986), of which it constitutes a minor revision intended, above all, to update the normative references (Clause 2).

Introduction

For reproducible test results, specimens with a defined state are required. In contrast to injection moulding, the aim of compression moulding is to produce test specimens and sheets for machining or stamping of test specimens that are homogeneous and isotropic.

In the process of compression moulding, mixing of material takes place on a negligible scale. Granules and powders fuse only at their surfaces and preforms (milled sheets) are only partially softened.

Isotropic and homogeneous specimens can, therefore, only be obtained when the moulding material is itself homogeneous and isotropic. This has to be considered when processing multiphase materials, such as ABS, which retain their internal structure.

Plastics — Compression moulding of test specimens of thermoplastic materials

1 Scope

This International Standard specifies the general principles and the procedures to be followed with thermoplastics in the preparation of compression-moulded test specimens, and sheets from which test specimens may be machined or stamped.

In order to obtain mouldings in a reproducible state, the main steps of the procedure, including four different cooling methods, are standardized. For each material, the required moulding temperature and cooling methods are as specified in the appropriate International Standard for the material or as agreed between the interested parties.

The procedure is not recommended for reinforced thermoplastics.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 286-1, *Geometrical product specifications (GPS) — ISO coding system for tolerances of linear sizes — Part 1: Bases of tolerances and fits*

ISO 4287, *Geometrical Product Specifications (GPS) — Surface texture: Profile method — Terms, definitions and surface texture parameters*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

moulding temperature

temperature of the mould or the press during the preheating and moulding time, measured in the nearest vicinity to the moulded material

3.2

demoulding temperature

temperature of the mould or the press platens at the end of the cooling time, measured in the nearest vicinity to the moulded material

NOTE For positive moulds, holes are normally drilled in the mould for measuring the temperatures defined in 3.1 and 3.2.

3.3

preheating time

time required to heat the material in the mould up to the moulding temperature while maintaining the contact pressure